Destined to fail? Psychopathy and intelligence as predictors of unemployment among juvenile offenders

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Tiivistelmä - Referat – Abstract

Tavoitteet. Psykopatian on yhteydessä työuriin, tuloihin ja työvuosiin. Työttömyys puolestaan on riski sekä yksilön että yhteisön hyvinvoinnille, ja saattaa heikentää psykopaatin integroitumista yhteiskuntaan. Tästä huolimatta varsinaista tutkimusta psykopatian ja työttömyyden suhteesta on vähän. Psykopatia jaetaan alatyyppeihin: prototyyppisiin psykopaatteihin ja menestyneisiin, perinteisesti älykkäämmiksi miellettyihin psykopaatteihin. Tämän tutkimuksen tarkoituksena oli kartoittaa, ennustavatko psykopatiapiirteet työttömyyteen liittyvää riskiä erikseen laillisessa ja pimeässä työssä, sekä sitä, muokkaako älykkyys tätä yhteyttä.

Menetelmät. Tutkimuksessa käytettiin yhdysvaltalaisista Phoenixin ja Philadelphian alueilla asuvista nuorisorikollisista (n=1083) koostuvaa, vuosina 2000-2010 kerättyä *Pathways to Desistance* –tutkimuksen aineistoa. Osallistujat olivat tutkimuksen alussa 14-19 –vuotiaita. Psykopaattisia piirteitä arvioitiin PCL:YV –menetelmällä, ja älykkyyttä tutkittiin WASI-testillä seitsemännen seurantavuoden kohdalla. Psykopatiapiirteiden ja älykkyyden yhteyttä työttömyyteen tutkittiin binäärisillä logistisilla regressioanalyyeillä.

Tulokset ja johtopäätökset. Psykopatiapiirteet ja matalampi älykkyys lisäsivät erikseen työttömyyden riskiä laillisen työn kontekstissa seitsemännen vuoden seurannassa. Laittoman työn kontekstissa psykopatia lisäsi riskiä työttömyyteen vain silloin, kun älykkyys oli matalampi. Riskiä työttömyyteen voidaan selittää persoonallisuudella, psykopatologialla ja antisosiaalisen käyttäytymisen jatkuvuudella. Tulokset osoittavat psykopatian olevan negatiivisesti yhteydessä työllistymiseen ja antavat osittain tukea myös älykkyyden suojaavalle vaikutukselle, mutta eivät tue menestyneen psykopatian käsitettä. Työn muovaava merkitys ja työllistymismahdollisuudet lienevät erilaisia psykopaateilla ja lisätutkimusta heidän työllistymismahdollisuuksistaan tarvitaan toimivampien integrointiratkaisujen kehittämiseksi, esimerkiksi poliittisen päätöksenteon tueksi.

Avainsanat – Nyckelord

psykopatia, älykkyys, työttömyys, menestynyt psykopatia, nuorisorikolliset

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Tiivistelmä - Referat – Abstract

Objective. Psychopathy is linked to income and years of employment. Unemployment, then, is a risk for both the individual and the society and can complicate the integration of psychopaths to the society. Yet, research on the relationship of psychopathy and unemployment is scarce. Psychopathy is thought to be divided into subtypes called prototype and successful psychopaths. The latter are traditionally viewed as more intelligent than prototype psychopaths. The aim of this study was to examine the predictive power of psychopathy to unemployment separately in legal and illegal work contexts. The moderating effect of intelligence was also explored.

Methods. The data of the current study was employed from the *Pathways to Desistance* study. The data consisted of juvenile offenders collected from 2000 to 2010 in Phoenix and Philadelphia, in the United States (n=1083). The participants were 14 to 19 in the beginning of the study. Psychopathic traits were assessed with PCL:YV and intelligence with WASI at the seventh year follow-up. The relationship between psychopathy was assessed with binary logistic regression analysis.

Results and discussion. Psychopathic traits and lower intelligence predicted the risk of unemployment in the legal work context. In the under-the-table context, psychopathy increased the risk of unemployment only among those with lower intelligence. The risk for unemployment among psychopathic individuals can be explained by their personality, psychopathology and the continuance of antisociality. The findings indicate that psychopathy has a consistent negative impact on employment and give partial support for the protective ability of intelligence but do not support the concept of successful psychopathy. The reforming impact of work and job opportunities might be different for psychopathic individuals. Therefore, further research is needed to develop effective solutions to political decision-making and enhanced integration practices.

Keywords

psychopathy, intelligence, unemployment, successful psychopathy, juvenile offenders

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1. INTRODUCTION

Psychopathic personality, characterized by traits such as a lack of empathy, magnified sense of self-worth and disregard for other people (Hare, Neumann & Widiger, 2012), often occur together with lower social functioning, such as lower amount of education, fewer years of employment and criminal activity (Andersen, Sestoft, Lillebaek, Mortensen & Kramp, 1999; Lindley, 2017). In addition, psychopaths seem to score lower in intelligence than non-psychopaths (Hart, Forth & Hare, 1990). However, successful psychopaths – a subtype of psychopathy – thrive in the outside world and achieve success (Lilienfeld, Watts & Smith, 2015). In fact, studies have found significant distinctions in the personality, physiology and even intelligence between psychopathic individuals. Thus, protective factors such as higher intelligence might differentiate this population by shielding them from antisocial and negative outcomes of psychopathy (Lykken, 1995).

Work is a big part of one's life, and thereby, unemployment has negative impacts on both the society and the individual. Research on the employment rate and opportunities of psychopaths is however lagging. Although those with an early onset of antisocial behavior do not necessarily benefit from the reforming effects of work (Moffitt, Caspi, Harrington & Milne, 2002), higher intelligence might facilitate the effectiveness of their rehabilitation back to the society. When trying to cut the cumulative continuity of antisociality (Moffit, 1993) and increase the chances of integrating juvenile offenders back to the society, it is important to explore the employment outcomes to better understand the phenomena related to psychopathy and its relations to intelligence. The purpose of this study is to examine the relationship between psychopathy and unemployment and the moderating role of intelligence in legal and illegal settings among juvenile offenders.

1.1 Psychopathy

Psychopathy is a severe personality disorder (Lynam, Caspi, Moffitt, Loeber, & Stouthamer-Loeber, 2007). The construct of psychopathy is represented by the four-factor model of interpersonal, affective, lifestyle and antisocial features (Figure 1) (Neumann, Hare & Pardini, 2015) and it is defined as a combination of features such as manipulation, charm, lack of empathy and remorse and versatile criminality (Table 1) (Forth, Kosson & Hare, 2003). This four-factor model has been found globally independent of the type of the sample and a research method (Neumann et al., 2015). Psychopathy is most commonly assessed by *The Psychopathy Checklist* (PCL) by Robert Hare (Hare, 1991) in which the common and current prototypical view on psychopathy is based on. The score that is reached in PCL is the indicator of the state and degree of one's psychopathy.

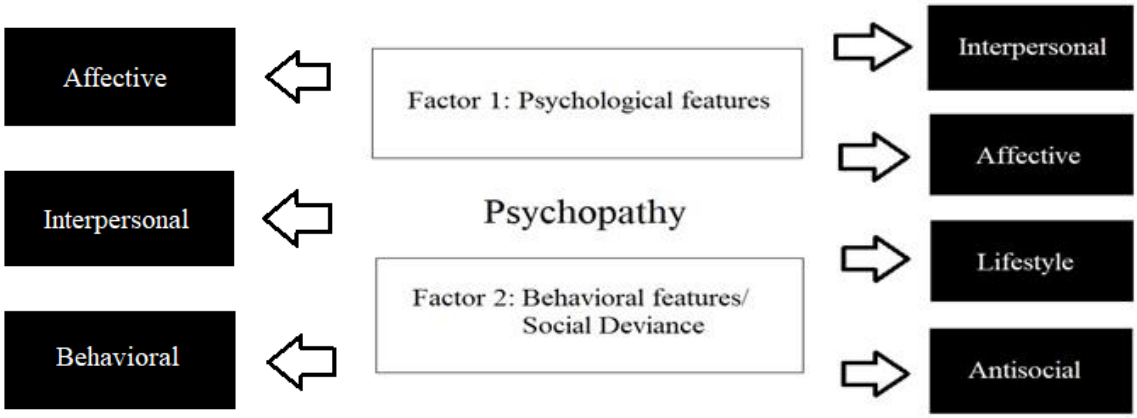

Figure 1. *The structure of psychopathy divided into two main factors and further into three and four factors combined from* Brazil (2016), Cooke and Michie (2001), and Forth et al. (2003).

Psychopathy can be classified into two different subtypes, primary and secondary psychopathy (Figure 2). These two types differ according to in their etiology and how psychopathic traits and factors are emphasized in their personality (Skeem, Johansson, Andershed, Kerr & Louden, 2007). The value that the classification of psychopaths has to the current study will be discussed later, as we turn to examine the role of intelligence.

Table 1. *Items in the Hare Psychopathy Checklist: Youth Version (PCL:YV) and their definitions divided into four factors (Forth et al., 2003).*

Factor	Trait	Definition
Interpersonal	Glib and superficial charm	Charming, engaging and verbally smooth and quick-witted
	Grandiose self-worth	Seeing themselves as perfect, the best; arrogance and aggerated view of abilities and self-worth
	Pathological lying	A need to lie
	Conning and manipulativeness	Calculating, wry and devious, or in a more extreme form, manipulative and treacherous
Affective	Lack of remorse and guilt	No regret or empathy toward suffering of others
	Shallow affect	A lack of emotions
	Callousness and lack of empathy	Underlying coldness
	Failure to accept responsibility for own actions	Manifested as manipulation and a lack of conscientiousness
Lifestyle	Need for stimulation	Seeking novel and exciting stimuli leading to risk-taking and low-discipline; proneness for boredom
	Parasitic lifestyle	A lack of motivation and interest in responsibilities mirrored as exploitative, manipulative behavior and no remorse of being financial dependency
	Lack of realistic long-term goals	Inability to set long-term goals
	Impulsivity	Inability or uninterest to consider consequences leading to unpredictable and reckless behavior
	Irresponsibility	No interest in responsibilities and commitments
Antisocial	Poor behavioral control	Inability to be patient, and control expressions of negative feelings and aggression
	Early behavior problems	Behavior problems before age 13
	Juvenile delinquency	Behavioral problems, aggressive, manipulative and criminal behavior at 13-18
	Revocation of conditional release	Tendency to break conditional release
	Criminal versatility	Includes bragging
Others	Promiscious sexual behavior	Short, superficial relationships, tendency to have many simultaneously, sometimes sexual coercion
	Many short-term relationships	This is reflected to even marital and familial relationships

Primary psychopathy	Secondary psychopathy
Genetic Higher scores in both behavioral and psychological factors, OR especially high in the psychological factor + Assertiveness - Anxiety compared to violent non-psychopaths	**Environmental** and experience-based Higher scores in the behavioral factor + Emotionally unstable and withdrawn compared to violent non-psychopaths + Features of borderline personality + Reactive violence + Mental diorders and interpersonal disfunctioning

Figure 2. *Psychopathy divided into two subtypes according to common assumptions and findings (Skeem et al., 2007).*

Twin and longitudinal studies have touched on the stability of psychopathy. Psychopathic traits seem to be relatively stable from childhood to adolescence and adulthood (Gretton, Hare, & Catchpole, 2004; Lynam, Loeber, & Stouthamer-Loeber, 2008; Lynam et al., 2007; Schmidt, McKinnon, Chattha, & Brownlee, 2006). It appears that genetics have a large effect during adolescence, especially in the delivery of callousness (described as insensitiveness and indifference) and impulsivity (Forsman, Lichtenstein, Andershed & Larsson, 2008). This means the impact of environmental effects on the development of psychopathy are much smaller than the impact of genes, although this is where primary and secondary psychopathy might differ (Skeem et al., 2007).

Violent behavior is common among psychopathic individuals (Hare, 1996; Hare & McPherson, 1984): they tend to have more charges, are more aggressive and more inclined to use a weapon during a crime and violent behavior is more persistent compared to normal population (Hare & McPherson, 1984). Consequently, according to Hare's (1996) literature review, psychopaths are over-represented in prisons: in the adult population, the prevalence of psychopathy is approximately 0.75-2 % (Dolan, 2004), however, about 15 to 25 % of prisoners can be diagnosed as psychopaths (Hare, 1996). Among young offenders, the prevalence of psychopathy varies between 12 and 37 % depending on the sample and the psychopathy measure (Dolan, 2004). Similarly, the recidivism rate is higher among psychopaths compared to non-psychopaths (Leistico,

Salekin, DeCoster & Rogers, 2007). The research on prison populations is extensive, yet, the effect of psychopathy on employment remains an under-researched mystery.

Slight disagreements revolve around the use of the term psychopathy, especially when it is being used for young people. The concept of juvenile psychopathy is often challenged because of its long-lasting effects on the individual's life. Additionally, it has been stated that psychopathy seems to lie on a continuum instead of being a taxonomical phenomenon, and thereby, it is misleading to talk about juvenile psychopaths (Dolan, 2004; Murrie et al., 2007). Conversely, one should use the phrase "relatively high in psychopathy features" (Murrie et al., 2007) or "traits" (Dolan, 2004). However, the construct of juvenile psychopathy is supported by studies concerning various populations such as young boys (Lynam et al., 2005), and on the other hand, by its stability across ages (Neumann et al., 2015). For practical reasons, in the current study the concepts of juvenile psychopathy and psychopathy are frequently used although it is understood that psychopathy is not a dichotomous phenomenon.

1.2. Psychopathy, employment and income

There is relatively little research on the relationship between psychopathy and employment. The lack will be approach first, by discussing the scarce literature on employment, income and psychopathy. Then, hypotheses can be formulated based on antisocial personality disorder (APD) as due to the antisocial personality characteristics of psychopathy, it is likely that psychopathy leads to difficulties in employment. Last, the literature on childhood conduct and behavior problems that are also reflected in the psychopathy criteria are explored.

Few studies have examined the relationship between psychopathy and unemployment. Psychopathy has been associated with being unemployed (Lindley, 2017) and lower number of employment years (Andersen et al., 1999). Psychopaths were also more likely to get fired more frequently (Boccio & Beaver, 2015). Middle-aged men that possessed more psychopathic traits achieved success at work to a lesser extent, in the form of status

and wealth (Ullrich, Farrington & Coida, 2008). Thus, psychopathy seems to be a risk factor for unemployment.

Employment and income are tightly related, but the findings between psychopathy and income are inconsistent. Higher income would imply regular and full-time employment or positioning in higher paying positions. Psychopathic personality was indeed related to lower household income (Boccio & Beaver, 2015). Conversely, Dark Triad traits (psychopathy, narcissism and Machiavellianism) correlated positively with self-reported income (Jonason, Koehn, Okan & O'Connor, 2018), and interpersonal-affective psychopathic traits associated with higher income and moreover, predicted higher corporate ranks in the financial field (Howe, Falkenbach & Massey, 2014). Psychopathy and higher income and better productivity were also found by Lindley (2017) but they were explained by their better numerical abilities. The incoherence of these findings might be explained by different emphasis on psychopathic factors between individuals (Patrick, Fowles & Krueger, 2009) which will be discussed in more detail later.

Antisocial personality disorder (APD) and psychopathy have many common personality traits and behavioral similarities, according to the description of APD in *The Diagnostic and Statistical Manual of Mental Disorders, Third Edition* (DSM-III) (Hare & McPherson, 1984) which is why psychopathy is sometimes used to describe the same concepts as antisocial personality and sociopathy (Hare, 1996). Moreover, overt antisociality is linked to psychopathy (Neumann et al., 2015). Nevertheless, although these disorders are conceptually similar and many of the psychopathy traits are common with APD traits (Hare & McPherson, 1984), these disorders are not the same: it is common for psychopaths to be antisocial, but not all APDs are psychopaths (Hare, 2009). In fact, there is a bigger emphasis on interpersonal and affective features in psychopathy whereas APD underlines antisocial behavior (Hare, 2009). Analogously, callous-unemotional personality traits that are prevalent among some children and resemble psychopathic traits partially overlap with the diagnosis of conduct disorder in *The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-5) (Frick, O'Brien, Wootton & McBurnett, 1994; Herpers, Rommelse, Bons, Buitelaar & Scheepers, 2012).

A literature review by Moran (1999) concludes that antisocial personality is associated with various kinds of medical and social problems. Although research is scarce, antisocial personality was related to three-fold odds of unemployment (Bland, Stebelsky, Orn & Newman, 1988). Similarly, delinquency and antisocial behavior in childhood have been found to predict unemployment (Caspi, Wright, Moffitt & Silva, 1998). Consequently, conduct problems in childhood and adolescence seem to have an impact on individuals career growth: they are related to changing jobs more frequently, getting passed on the desired job more often, and doing less-skilled work than their comparisons (Maughan, Gray & Rutter, 1985). These difficulties were accounted for antisocial behaviors (Maughan et al., 1985). Early onset of antisociality and behavioral problems were also associated with problems at work, lower recent job status and longer time spent unemployed, worse communication skills, inclination to give a bad first impression (Moffit et al., 2002) and poverty at 50 years of age (Samuelson, Hodgins, Larsson, Lam & Tengström, 2009). Thus, it seems that antisocial aspects of personality effect employment outcomes negatively. Concluding, psychopathy, antisocial conduct in childhood and adolescence and especially persistence of such, are related to adulthood unemployment.

1.3 Psychopathy and intelligence

Research of psychopathy and intelligence have mainly been divided into two directions, emotional and cognitive intelligence. In the current study, focus will be on general intellectual abilities including verbal comprehension and expression, semantic knowledge and nonverbal abstract problem solving. Intelligence is commonly expressed as “IQ”.

There is only little research on the moderating effect of intelligence on the relationship of psychopathy and unemployment. Lower intelligence alone predicted future unemployment among youth with behavioral problems (Caspi et al., 1998) and reduced the potential number of employment years among psychopathic individuals (Andersen et al., 1999). Later, Boccio & Beaver (2015) found an interaction between psychopathy and intelligence that predicted higher income. Higher levels of psychopathy were predictive of lower income across all levels of intelligence but people with more both psychopathic personalities and higher intelligence attained significantly better yearly income than

those with average or low intelligence (Boccio & Beaver, 2015). Thereby, those protected by higher intelligence might succeed in breaking out of the cumulative circle of antisociality and criminality, or inherently differ from those with lower intelligence. Psychopathic individuals with higher cognitive abilities can be described as successful psychopaths.

1.3.1 Successful psychopathy

Successful psychopaths possess psychopathic traits but achieve work life (Lilienfeld et al., 2015) or criminal success (Gao, Raine & Schug, 2011). The concept of successful psychopathy, sometimes referred to as industrial, non-prototype or subclinical psychopathy, has been rising after recognizing that not all individuals with high number of severe psychopathic traits are found in prisons (for example, Cleckley, 1941*;* Hall & Benning, 2006; Lilienfeld et al., 2015). Babiak, Neumann and Hare (2010) found an unexpectedly high number of psychopaths in corporate settings compared to its prevalence in the whole population. There are indeed some cautious and tentative implications towards white-collar criminals often manifesting the traits of successful psychopaths (Blickle, Schlegel, Fassbender & Klein, 2006; Ragatz, Fremouw & Baker, 201*2*). Moreover, there are plenty of psychopathic individuals that are more responsive to treatment (Hare, Clark, Grann, & Thornton, 2000) and have lower rate of recidivism (Hemphill, Templeman, Wong, & Hare, 1998; Salekin, Rogers, Ustad, & Sewell, 1998) so it seems that distinct subtypes that cannot be explained by the simple division to primary and secondary types of psychopathy exist.

There are at least three models to explain successful psychopathy (Hall & Benning, 2006). First, successful psychopathy could be a subclinical manifestation of psychopathy (Cleckley, 1941). In this view, antisocial behavior stems from the core features of psychopathy: the etiology is the same but there are differences in the degree of the traits. Second, fearlessness hypothesis believes that fearlessness is represented among all psychopaths, and the pathology and etiology are the same (Lykken, 1995). However, protective and mediative factors such as socialization, intelligence and talent lead to an atypical way of navigating in the world in contrast to prototype psychopaths, molding the

manifestation of psychopathy – whether it leads to prosocial or antisocial behavior. According to this hypothesis, successful psychopathy is a milder type of psychopathy. Third, based on the dual-process model, there are differences in the etiology of the four factors of psychopathy so that the interpersonal-affective dimension is distinct from the impulsive-behavioral dimension (Patrick et al., 2009). Successful psychopathy highlights the interpersonal-affective traits as the impulsive behavioral style and its features are more emphasized among prototype psychopaths. Thereby, these dimensions would be independent (Patrick et al., 2009). In short, successful psychopathy is a manifestation of lower degree of traits in their number or severity, a result of protective factors, or a consequence of differential emphasis on its dimensions and thus, behavior.

As mentioned earlier, there seem to be differences in the psychopathic population that do not fall into the categorization of primary and secondary psychopathy. Typical characteristics for successful psychopaths are better autonomic responsivity, enhanced executive functioning and they seem to manifest more traits such as fearlessness, dominance, consciousness, high boldness, and low disinhibition (Lilienfeld et al., 2015), and similar findings have been found with different name labels: emotionally stable psychopathy subtype that converge with the description of a successful psychopath seem to plan ahead more but tend to be risky, fearless, socially dominant and immune to negative events whereas aggressive psychopaths have a lower IQ and difficulties in controlling their behavior (Hicks, Krueger & Newman, 2004). In fact, successful and unsuccessful psychopaths have been found to have distinguishing differences in their brain functioning related to focusing and locating attention: uncaught, thus successful psychopaths showed enhanced information processing capability compared to caught psychopaths (Gao et al., 2011). In line with the dual-process model (Patrick et al., 2009), successful psychopaths differ from prototype psychopaths by having less traits from the deviant lifestyle and antisociality factors, the behavioral dimension of psychopathy (Babiak, 1995). Indeed, in forensic psychopathic populations, impulsivity and irresponsibility as forms of overt antisocial behavior are especially emphasized (Neumann et al., 2015). Based on the literature on successful psychopathy, models two and three are more likely to hold true than Cleckley's original model (Lilienfeld et al., 2015).

The possible success of psychopaths could be explained by the prosocial manifestation of psychopathy. This refers to that in certain situations psychopathic traits, such as boldness may be beneficial and adaptive, for instance, in the working world (Lilienfeld et al., 2012). For instance, the communication skills and strategic thinking of psychopathic co-workers were valued regardless of the lack of their perceived actual accomplishments and skills (Babiak et al., 2010). This reflects their abilities to deceive and advance irrespective of their deficits and negative impacts. In contrast, impulsive antisociality, which is in the core of unsuccessful psychopathy (Hare et al., 2012) is related to negative job performance (Lilienfeld et al., 2012). Thus, successful psychopathy seems to be more adaptive to the society and could lead to better employment opportunities and lower the risk from psychopathy to unemployment.

1.3.2 Psychopaths, intelligent masterminds?

The structure of successful psychopathy could be characterized by an emphasis on traits that are linked to better performance and cognitive ability measured by intelligence measures, or the consequence of the protective powers of higher intelligence. In 1941, Cleckley brought up the idea that psychopaths would have higher intelligence than average. This assumption was based on his clinical case studies. However, this hypothesis does not seem to stand according to recent studies aiming to link higher IQ to psychopathy as many have tried and failed (for example, Hart et al., 1990; Kowalski et al., 2018). Emerging evidence reveal the more complex connection between psychopathy and intelligence. Challenging Cleckley's original hypothesis, psychopaths in general seem to be less intelligent than non-psychopaths (DeLisi, Vaughn, Beaver & Wright, 2010; Heinzen, Köhler, Godt, Geiger & Huchzermeier, 2011; Howe et al., 2014). Nonetheless, 25 % of the variance in intelligence could be explained with the four-factor model of psychopathy (Vitacco, Neumann & Wodushek, 2008) (see Figure 1), and 36 % with the three-factor model (Vitacco, Neumann & Jackson, 2005), which means that psychopathy and intelligence seem somehow connected. Therefore, it is likely that the association exist, perhaps just not in the form that was thought: IQ might divide psychopaths in subgroups which significantly differ from each other, thus supporting the distinction of successful and prototype psychopaths.

The conflicting results are likely to be explained by different samples and the differential relations of intelligence to individual factors emphasized in psychopathic personality (Figure 3). A strong negative association with intelligence and the affective factor, and a negative correlation with the lifestyle factor have been detected in different samples (DeLisi et al., 2010; Vitacco et al., 2008). The interpersonal factor has continuously been associated with higher intelligence (Ben-Yaacov & Glicksohn, 2018; Vitacco et al., 2005; Vitacco et al., 2008). There is a moderate positive relationship for the antisocial factor (Vitacco et al., 2008). Converging evidence on the relationship between intelligence and different factors of psychopathy have been found in a more similar sample to the current study, as 11 to 18-year-old boys and girls from a regional detention facility were assessed (Salekin, Neumann, Leistico & Zalot, 2004). There was no significant difference found in IQs between non-psychopaths and those who had high scores in the interpersonal dimension and low in the antisocial factor (Heinzen et al., 2011). It seems that especially the interpersonal factor is linked positively to intelligence – the same factor of which traits are emphasized in successful psychopathy (Babiak et al., 2010).

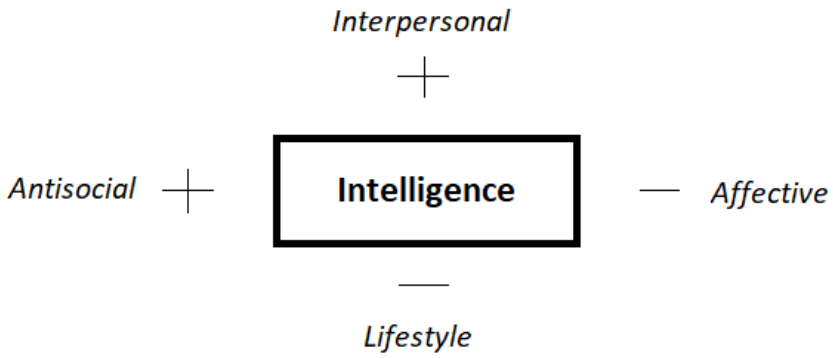

Figure 3. *The simplification of the main findings on the correlations between intelligence and the four factors of psychopathy (Ben-Yakoov & Glicksohn, 2018; DeLisi et al, 2010; Salekin et al., 2004; Vitacco et al., 2005; Vitacco et al, 2008).*

In line with Lykken's (1995) fearlessness model of successful psychopathy, it is noted that enhanced cognitive abilities are one of the variables that can intervene the relationship of psychopathy and criminality (Wall, Sellbom & Goodwin, 2013), changing the manifestation of psychopathy. Better cognitive functioning could in theory help specific

characteristics such as manipulation and a charming demeanor bloom (Salekin et al., 2004). It seems as those whose psychopathic traits are emphasized by interpersonal and antisocial features might form a group of their own, more adaptive and intelligent individuals compared to those that attain a higher number of traits on the affective and lifestyle factors.

It is important to explore the employment outcomes when aiming to cut the cumulative continuity of antisociality (Moffit, 1993) and to increase the chances of integrating back to the society. For the society, it is alarming to have a population that tends to live parasite-like lives, are inclined to criminality (Hare et al., 1990) and when at work, may cause disruptions to the environment and affect negatively to businesses (Babiak, 1995; Clive, 2012). It has been estimated that white-collar crime costs are at approximately $1 trillion a year in the United States alone (Friedrichs, 2007).

1.4 Aim of the study

To the current knowledge, research on psychopathy and unemployment is extremely limited, and therefore, the relationship between psychopathy and employment remains unknown. Due to the inability of correlational studies to assess causality, this study is one of the firsts of its kind to focus on the predictive effect of psychopathy and intelligence on the employment of juvenile offenders. Based on previous research on intelligence and psychopathy and the concept of successful psychopathy, interest of this study also lies in the moderating effect of intelligence aiming to find support for Lykken's (1995) fearlessness hypothesis. As psychopathy might decrease opportunities to regular employment, psychopaths are perhaps more inclined to work in different unofficial and under-the-table contexts, and conversely, less likely to work in legal, official, community-work environments. Thereby, these two types of work are examined separately. The research question is: "How do psychopathic traits among young offenders predict employment, and does intelligence moderate this effect?" (Figure 4).

It is hypothesized that psychopathic features will increase and predict the risk for unemployment at the seventh-year follow-up in both, official work setting and under-the-table work setting. It seems that no previous literature on this division exists and has not been explored by a similar research question or in an alike population as in the current study. In addition, according to the second hypothesis, intelligence is expected to lead to an atypical manifestation of psychopathy resulting in lower risk of unemployment, thus, higher IQ is a protective factor that reduces the negative impacts of psychopathy by modifying this relationship.

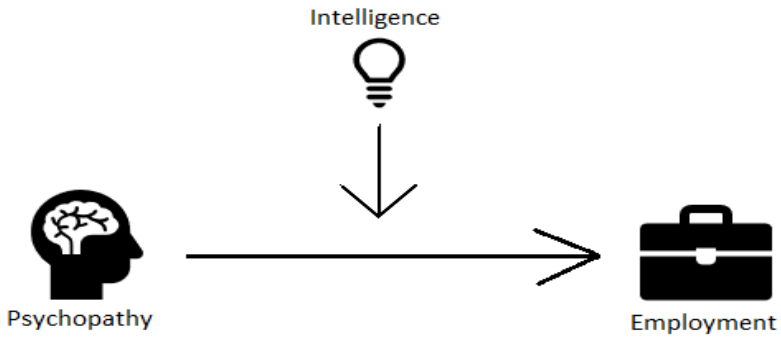

Figure 4. *The relationship between psychopathy and employment when intelligence is a moderator.*

2. METHODS

2.1 Sample

This study utilized the data from the largest longitudinal study of serious adolescent offenders, *Pathways to Desistance*, that was conducted between November 2000 and January 2003 (Schubert et al., 2004). The original aim of the study was to identify different pathways leading to delinquency, describe the role of social context and developmental changes reflected in antisocial behavior and comparing effects of interventions and sanctions to individual's development and life course. The data was collected from two cities in the United States, specifically, Phoenix, Arizona and Philadelphia, Pennsylvania. Participants were drawn from juvenile and adult courts. The sample consisted of heterogeneous juvenile offenders that had conducted mainly felonies

in addition to a few cases of misdemeanors related to crime against property, sexual offence or weapon related crime. To avoid over representation of drug related crimes, the number of males that were convicted from drug related crimes was limited to 15 percent. This did not apply to females.

The sample of the current study ended up consisting 1083 individuals. Originally, 2008 juveniles were asked to participate in the study, from which 20 per cent declined. Initially 10 461 cases were found from which 3807 cases were applicable due to their convictions. 1799 cases were excluded due to overrepresentation and work overload on the interviewers. The final size of the original study was 1354 (176 females and 1117 males). During the original study, 48 participants died and 46 decided not to continue their participation.

The age of participants at the time of the committed crime ranged between 14 to 17, and the data was collected when the participants were between ages 14 to 19, averaged in 16 years old. The follow-up relevant to our study was conducted seven years after the enrollment, meaning that at the time of the follow-up, the participants were between 21 to 26 years old. In the *Pathways to Desistance* study, ethnicity was divided into six groups: African American, Caucasian, Hispanic, Native American, Asian and others. Because the number of participants who belonged to the three latter groups was so small, they were combined as one, “Other”. In the current study, the ethnicities were represented as follows: African Americans 38,8 % (440), Caucasians 21,6 % (245), Hispanics 34,7 % (393) and Others 4,9 % (55).

2.2 Measures

The current study utilized the baseline indicators of psychopathy, intelligence and employment. Employment was also measured for the seventh-year follow-up.

Demographic information. Demographic information was collected by interviews. In the current study, demographic factors age, ethnicity and gender were added to the model for controlling their effects.

Employment. In the *Pathways to Desistance* study, no total scores for employment were calculated. Therefore, in the current study, questions regarding weeks worked in the recall period, whether in community or under-the-table setting, were utilized. These questions were named as official work and under-the-table work, reflecting the different types of jobs. An official job was defined as legal, regular-paying community-based job whereas under-the-table meant unofficial, illegal work. The interest of this study was merely in categorical employment: if the participants were employed or not in the seventh-year follow-up. Thereby, all the cases that did not provide knowledge about their current employment situation were not included in the analysis. 16 % did not have information about their follow-up employment. Information about employment at the time of the baseline interview was used as well.

Proportion of time in recall in all settings. The proportion of time in recall period across all settings was controlled as a time varying covariate to control for exposure time to the community as this would have an impact on their job hunt.

Interview location. Interview location at the last interview was categorized as subject's home, at the facility or somewhere else, and it was controlled.

Psychopathy**.** Psychopathic traits were measured with PCL:YV that bases on The Psychopathy Checklist Revised (PCL-R; Hare, 1991) and is designed for assessing psychopathic characteristics among 12 to 16-year-olds. Compared to PCL-R, changes were made by modifying and deleting items that that concern work and crime histories and the number of romantic relationships. 45 cases were missing a PCL score and these cases were excluded from the study.

PCL:YV consists of 20 items that are scored on a three-point ordinal scale: "0" item does not apply to the youth, "1" item applies to a certain extent and "2" item applies to the youth, lowest score being 0 and highest 40. The items assess the four-factor model of psychopathy; interpersonal, affective, lifestyle and antisociality. Higher scores in PCL:YV indicate greater number of psychopathic characteristics. Previously, PCL:YV has been reported to have a good differentiating and predictive validity (Schmidt et al., 2006). In this sample, the reliability for total scores (Cronbach's alpha) was .87. Intraclass

correlation coefficient (ICC) that were used to assess the inter-rater reliability for total scores was .91.

Regardless of recommendations by the developers of PCL:YV about a semi-structured interview of 60 to 90 minutes, this length was not achieved in *Pathways to Desistance* study. Alternatively, the questions were included in the baseline interview battery. Almost all questions were open ended as recommended. Trained interviewers completed the rating form with the information collected from court records and the parental collateral interview and them with participants' answers related to PCL:YV pulled from the baseline interview.

The four-factor model has been found across ages (Leistico et al., 2007), research methods and samples (Neumann et al., 2015), albeit it was noted that more research needs to be done to strengthen this view (Leistico et al., 2007). Especially among the youth, antisociality seems to be pivotal at indicating psychopathic proclivity and not just merely something that follows psychopathic traits (Neumann et al., 2015). Moreover, the fit of the four-factor model was generally good in a sample of North American incarcerated adolescent males (Neumann, Kosson, Forth & Hare, 2006). Hence, we trust that PCL:YV is a reliable measure to assess psychopathic traits among the young offenders in the current study. What should be noted, though, is that PCL-R and PCL:YV are initially based on a two factor model of psychopathy, including a combined dimension of affective and interpersonal traits and an antisocial, socially deviant factor (Hare et al., 1990; Harpur, Hare & Hakstian, 1989), and although in this study the interest was only in the total score of psychopathy, two factors have been calculated in the sample.

***Intelligence*.** In the *Pathways to Desistance* study, intelligence of the current sample was measured with the short version of *The Wechsler Abbreviated Scale of Intelligence* (WASI; Wechsler, 1999) that produces an estimate of general intellectual ability. WASI includes four subsets called Similarities, Vocabulary, Matrix Reasoning and Block Design. In the *Pathways to Desistance* study, the continuous estimate of general intelligence was formed by subsets Vocabulary and Matrix Reasoning, which represent semantic knowledge, verbal comprehension and expression, and nonverbal abstract problem solving and inductive reasoning, respectively. For the Vocabulary subset, the participant is

asked to orally define four images, and 37 words that are presented orally and visually, whereas in Matrix Reasoning the individual needs to select a correct response from five possibilities to complete 35 grid patterns. Higher scores indicate greater ability. WASI is normed for people between ages six and 89 years.

The reliability for the general estimate of intelligence has been found to be excellent (Cronbach's alpha = .88, test-retest r = .93) (Abu-Hilal, Al-Baili, Sartawi, Abdel-Fattah & Al-Qaryouti, 2011). There is also evidence for the validity of two factor structure (X^2 = 5.53, df = 2, p > .05, CFI = .998 *TLI* = .994, *RMSEA* = .033) (Abu-Hilal et al., 2011). WASI is also strongly associated with *The Wechsler Intelligence Scale for Children* (WISC-III) -test (r = .81) and with *The Wechsler Adult Intelligence Scale* (WAIS-III) test (r = .87) (Wechsler, 1999). In the *Pathways to Desistance* study, the WASI was given to the participants on paper and it was administered in approximately 15 minutes. Calculated scores that were entered into the database were generated by following the instructions in the WASI Administrator's Manual. In the current study, there were eight cases that were missing WASI intelligence score, and these cases were exclude from the study.

2.3 Procedure and statistical analysis

A written consent was filled by participants and by guardians of those who were underaged. Computer-assisted interviews were conducted in the participants' homes, or in public places such as libraries, or in facilities, first, in every six months for three years and then annually through seven years. Measures and skip pattern associated with them were programmed onto laptops. Items were read out loud by trained interviewers. To ensure maximized privacy of the participants, they responded by using a keypad to enter their answer. They were encouraged to be honest and it was emphasized that their responses would not affect their futures. Confidentiality was ensured by confidentiality protections given by statute to the Department of Justice. In addition to the interview, other information was gathered from interviews from family and friends and official records.

The relationship of psychopathic traits and intelligence to future employment was assessed by the main effect of psychopathy, the main effect of intelligence and the interaction of these two factors from the seventh-year follow-up. A stepwise binary logistic regression was conducted for both employment variables individually. Psychopathy and intelligence scores were standardized to decrease multicollinearity. Rest of the variables, excluding ethnicity and interview location, were centered to facilitate the understanding of the generalizability of the results. In both settings, in case the person had been working whether officially or under-the-table they were signed as 0. If they reported working zero weeks in recall period, they were rated as 1, meaning unemployed. Age, gender, ethnicity, recall period, interview location and baseline employment were added to all models for controlling for their effects. Then, the main effects of psychopathy and intelligence were added stepwise, one by one. Last their interaction was added to the analysis. Missing cases were excluded from the analysis listwise.

The results of logistic regression analysis are stated as odds ratios. Odds ratios describe a risk: how many times bigger the odds of one outcome is for one value, compared to another value. 95 percent confidence intervals and p-values that reflect the statistical significance of the odds ratio are included in the models. The analyses were conducted by using IBM SPSS Statistics 24.0.

3 RESULTS

3.1. Missing values

A dichotomized variable that described missing values of employment situation at the last interview was structured. Variable was assigned as 1 if there was no information available on their employment at the seventh-year follow-up, and as 0 when these answers could have been gathered. The association between missing values and used baseline variables was explored by binary logistic regression. These results are presented in Table 2. Missing values were predicted by gender and black ethnicity: men were less likely than women (OR=0.34, 95 % CI=1.18–0.64, p <.001) and blacks were more likely than whites (OR=2.03,

95 % CI=1.28-3.23, *p* = .003) to have no information on their employment situation at the seventh-year follow-up. Age, other ethnicities, employment at baseline, psychopathy scores and intelligence scores did not predict drop-out.

Table 2. *Predictor variables from the baseline interview predicting missing values at seventh-year follow-up.*

Predictors of missing values	Odds ratio (CI 95%)	*p*	Nagelkerke R^2
Ethnicity[a]		.003	.053
Black	2.03 (1.28-3.23)	.003	
Hispanic	1.21 (0.74-1.97)	.445	
Other	1.17 (0.50-2.72)	.723	
Age	1.08 (0.95-1.23)	.256	
Gender[b]	0.32 (0.17-0.61)	.000	
Employment at baseline[c]	0.84 (0.59-1.18)	.316	
Psychopathy scores	1.03 (0.88-1.19)	.753	
Intelligence scores	0.92 (0.79-1.08)	.328	

The significance of logistic regressions was tested with Wald's test.
[a] reference group whites
[b] 0=female 1=male
[c] employed=0 unemployed=1

3.2 Descriptive statistics and correlations

The sample characteristics are displayed in Table 3, divided into employed and unemployed groups. 59,7 % of participants were employed at the time of the seventh interview. Some were employed in both, official and under-the-table context, but it was more common to be employed officially. Independent samples t-tests were conducted to compare the predictor variables between employed and unemployed participants.

There was a significant difference in the scores for employed (*M*=0.71, *SD*=0.45) and unemployed (*M*=0.80, *SD*=0.40) conditions for baseline employment; *t* (1053,541)=3.46, *p* = 0.001 when equal variances were not assumed. Similarly, a significant difference in the scores for employed (*M*=0.009, *SD*=0.21) and unemployed (*M*=0.62, *SD*=0.43) conditions

was found; t (566,059)=23.68, p < .000 for recall period. The employed group of participants (M=14.53, SD=7.52) scored lower in psychopathy than the unemployed group (M=17.83, SD=7.66); t (898,976)=6.98, p < .000. A difference was also found in the IQ scores for employed (M=86.37, SD=12.91) and unemployed (M=82.54, SD=13.20) conditions; t (895,666)=-4.70, p < .000, indicating IQ was higher in the employed condition. These results suggest that the two groups distinctively differed from each other. Correlations are displayed in Table 4. No multicollinearity was detected as tolerance ranged from .871 to .964 and the VIF values were between 1.038 and 1.148, even though there were some mostly small to moderate significant correlations between the variables.

A little surprisingly, results of the Pearson correlation indicated no correlation between psychopathy and intelligence in the current sample (r = -.008, p = .786). Interestingly, psychopathy scores were positively related to the follow-up employment outcomes, official work (r = .179, p < .001) and under-the-table work (r = .094, p = .002), whereas intelligence was significantly negatively associated with unemployment in official work setting (r = -.176, p < .001) but not in under-the-table work. This indicates, that higher intelligence might have an individual impact on employment only at a community level. Surprisingly, the results indicated that there was a strong positive association between unemployment at follow-up and recall period in all settings (r = .633, p < .001), meaning that longer time with community access associated with unemployment. Similar correlations were found to the individual work variables: there was a strong significant positive association between recall period length and unemployment in official work setting (r = .523, p < .001) and a moderate positive association to unemployment in under-the-table work (r = .248, p < .001). Unemployment was moderately correlated with psychopathy (r = .208, p < .001) and negatively correlated with intelligence (r = -.142, p < .001). Results of the Pearson correlation indicated that there was a positive correlation between recall period length and psychopathy score (r = .220, p < .001). White ethnicity was associated with being interviewed at home, whereas black ethnicity was significantly associated negatively to subject's home and positively to "other", which indicates differences between ethnicities.

3.3. Binary logistic regression

3.3.1 Official work setting

The effect of psychopathy, intelligence and their interaction to unemployment in two different settings, official and illegal work, was analyzed with a binary logistic regression, where psychopathy and intelligence were the independent variables, and unemployment was the dependent variable. Results of the binary logistic regression predicting unemployment in the official work setting are displayed in Table 5.

Table 5. *Logistic regression models predicting unemployment in the legal work setting when age, gender, employment at baseline, proportion of time in recall period across all settings, location at last interview and ethnicity were controlled (N=1083).*

		Odds ratio (95 % CI)	*p*	Nagelkerke R^2
Model 1				0.42
Age		1.00 (0.87-1.14)	.947	
Gender		1.52 (1.03-2.25)	**.036**	
Employment at baseline		1.22 (0.85-1.73)	.279	
Recall period		12.69 (6.70-24.02)	**.000**	
Location of interview			**.000**	
	Facility	2.58 (1.48-4.49)	**.001**	
	Other	0.84 (0.60-1.17)	.303	
Ethnicity			**.000**	
	Black	2.16 (1.42-3.30)	**.000**	
	Hispanic	0.74 (0.48-1.13)	.167	
	Other	1.58 (0.75-3.31)	.227	
Model 2				0.43
Psychopathy		1.23 (1.06-1.44)	**.006**	
Model 3				0.43
Intelligence		0.80 (0.69-0.94)	**.007**	
Model 4				0.43
Interaction		1.10 (0.95-1.27)	.186	

OR = Odds ratios from the last step (when all variables are included)

The significance of logistic regressions was tested with Wald's test.

Reference categories are white and home as an interview location.

The analysis indicated that the best model was model three, and that there was a significant association between psychopathy (OR=1.23, 95 % CI=1.06–1.44, *p* =.006) and intelligence (OR=0.80, 95 % CI=0.69–10.94, *p* =.007) to official employment. A one point move up the psychopathy scale resulted in a 23 % higher risk for unemployment.

Table 3. *Descriptive statistics of the final sample divided by follow-up employment (N=1083).*

		Employed					Unemployed					
Variables		n	%	*M*	*SD*	Range	n	%	*M*	*SD*	Range	*p*
Employment at 7th year		676					407					.778
	Official	554	82.0	27.21	20.65	0-60.67						
Age	Under-the-table	229	33.9	9.2	16.83	0-60.67						
	23	200	29.6				148	32.4				
	24	194	28.7				134	29.3				
	25	60	8.9				34	7.4				
	26	0	0.0				1	0.2				
Psychopathy scores		657		14.54	7.52	0-35	431		17.87	7.64	0-39	**.000**
Intelligence scores		673		86.31	12.9	55-118	452		82.59	13.00	55-128	**.000**
Recall period across all settings		676		0.009	0.21	0-1	457		0.62	0.43	0-1	**.000**
Gender		676					457					.114
	Female	112	16.6				60	13.1				
	Male	564	83.4				397	86.9				
Ethnicity		676					457					.222
	White	167	24.7				78	17.1				
	Black	235	34.8				205	44.9				
	Hispanic	244	36.1				149	32.6				
	Other	30	4.4				25	5.5				
Interview location at last interview		676										.159
	Subject's home	347	51.3				98	21.4				
	At the placement	61	9.0				282	61.7				
	Somewhere else	268	39.6				77	16.8				
Employment at baseline		676					457					**.001**
	Employed	196	29.0				92	20.1				
	Unemployed	480	71.0				365	79.9				

Decrease of one point in intelligence grows the odds of unemployment by 1.25 times, compared to the reference category which was whites and last interview conducted at subject's home. Gender (OR=1.52, 95 % CI=1.03–2.25, *p* =.036) predicted unemployment. In an additional analysis focusing on the effects of gender, the analysis indicated that male gender had a 1.64 times higher risk to be unemployed compared to females (OR=1.64, 95 % CI=1.11-2.41, *p* =.012). Blacks were more likely than whites to be unemployed (OR=2.16, 95 % CI=1.42-3.29, *p* <.001). A one point move up the length of the recall period scale resulted in a 12.69% higher probability of being unemployed in the official work setting (OR=12.69, 95 % CI=6.70–24.02, *p* <.001). Moreover, interview location was a significant predictor only in the official employment context, as being interviewed at a facility compared to subject's home increased the risk for unemployment 2.58 times (OR=2.58, 95 % CI=1.48–4.49, *p* <.001). Together, the variables in the model 3 explained 42% of the variance in unemployment.

3.3.2 Under-the-table work setting

The results of the binary logistic regression for unemployment in under-the-table setting are displayed in Table 6. The time spent in recall across settings (OR=9.34, 95 % CI=4.05–21.59, *p* <.001) and black ethnicity predicted unemployment (OR=0.52, 95 % CI=0.33-0.82, *p* =.005) as did gender (OR=3.35, 95 % CI=2.01–5.59, *p* <.001). When the effect of gender was analyzed in an additional binary logistic regression, the results revealed that male gender had 3.24 times greater risk to be unemployed compared to females (OR=3.24, 95 % CI=1.96-5.37, *p* <.001).

There was a significant interaction effect between psychopathy and intelligence (OR=0.79, 95 % CI=0.67–0.92, *p* =.003), and this model accounted for 18 % of the variance in unemployment. This indicated that the effect of psychopathy to unemployment was decreasing when intelligence was high, whereas a combination of higher intelligence and lower psychopathy predicted unemployment. Lower intelligence and higher scores in psychopathy predicted the likelihood of unemployment. The interaction is illustrated in Figure 5.

Table 4. *Pearson's correlations for employment variables, intelligence, gender, age, ethnicity and interview location (N=1083).*

Predictors	1	2	3	4	5	6	7	8	9	10a	10b	10c	10d	11a	11b	11c
1. Unemployment at follow-up[a]	1	-.053	.005	.633***	.107***	.800***	.411***	.208***	-.142***	-.087**	.095**	-.034	.027	-.295***	.565***	-.246***
2. Gender[b]		1	-.024	-.259***	.060*	-.073*	.082**	-.071*	.015	.069*	-.016	-.059	.035	.268***	-.225***	-.061*
3. Age			1	.018	-.190**	.008	-.009	.117**	.005	-.044	.028	-.025	.077*	-.025	-.014	.039
4. Recall period across all settings				1	.089**	.523***	.248***	.220***	-.100**	-.108***	.047	.046	.001	-.445***	.810***	-.329***
5. Baseline unemployment					1	.090**	.071*	-.037	-.176***	-.089**	.034	.064*	-.047	-.04	.080**	-.037
6. Official unemployment[a]						1	-.03	.179***	-.169***	-.121***	.190**	-.095**	.011	-.251***	.478***	-.206***
7. Under-the-table unemployment[a]							1	.094**	-.018	.014	-.087**	.053	.052	-.095**	.210***	-.107***
8. Psychopathy								1	-.008	.021	-.046	.02	.017	-.093**	.203***	-.101**
9. Intelligence									1	.326***	-.254***	-.032	.021	.124***	-.094**	-.037
10a. Ethnicity: White										1	-	-	-	.143***	-.098**	-.054
b. Ethnicity: Black											1	-	-	-.129***	.019	.117***
c. Ethnicity: Hispanic												1	-	.014	.069*	-.083**
d. Ethnicity: Other													1	-.014	-.007	.021
11a. Interview location: Subject's home														-	-	-
b. Interview location: Facility															-	-
c. Interview location: Other																-

****p<.001 **p<.01 *p<.05*

[a] employed=0 unemployed=1 [b] female=0 male=1

A simple slopes analysis was conducted to assess if psychopathy's relationship to unemployment was significantly positive when intelligence is low and significantly negative when intelligence is high. The main effect of psychopathy was significant in the first simple slope analysis on lower intelligence (OR=1.40, 95% CI=1.11-1.77, *p*=.005) The main effect of psychopathy was not significant in the second simple slopes analysis on higher intelligence (OR=0. 87, 95 % CI=069-1.09, *p*=.223). Thus, psychopathy increases the risk to be unemployed when intelligence is low but not when intelligence is high.

Table 6. *Logistic regression models predicting unemployment in the under-the-table work setting when age, gender, employment at baseline, proportion of time in recall period across all settings, location at last interview and ethnicity were controlled (N=1083).*

	Odds ratio (95 % CI)	***p***	**Nagelkerke R^2**
Model 1			
Age	0.99 (0.86-1.13)	.833	.17
Gender	3.35 (2.01-5.60)	**.000**	
Employment at baseline	1.24 (.86-1.78)	.242	
Recall period	9.35 (4.05-21.59)	**.000**	
Location of interview		.746	
Facility	1.28 (0.64-2.56)	.479	
Other	0.92 (0.58-1.46)	.637	
Ethnicity		**.002**	
Black	0.52 (0.33-0.81)	**.005**	
Hispanic	0.92 (0.58-1.46)	.726	
Other	1.73 (0.67-4.46)	.257	
Model 2			
Psychopathy	1.11 (0.94-1.30)	.234	.17
Model 3			
Intelligence	0.94 (0.79-1.12)	.496	.17
Model 4			
Interaction	0.79 (0.67-0.92)	**.003**	.18

OR = Odds ratios from the last step (when all variables are included)
The significance of logistic regressions was tested with Wald's test.
Reference categories are white and home as an interview location.

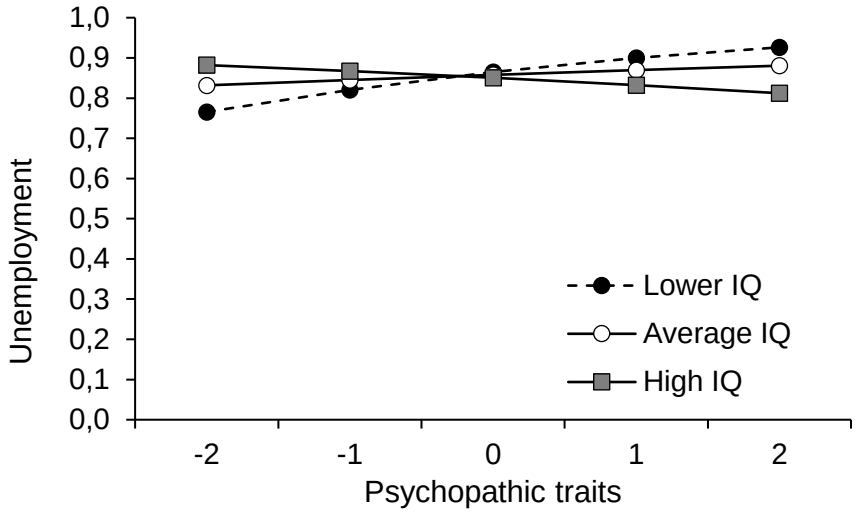

Figure 5. *Interaction of psychopathic traits and intelligence predicting unemployment among young offenders, when psychopathic traits are centered around 0.*

4. DISCUSSION

The purpose of this study was to examine the predictive power of psychopathy to unemployment, and if this is modified by intelligence. Juvenile offenders were most likely to be employed in the official work context when they were low in both intelligence and psychopathy simultaneously but in the illegal setting intelligence was able to balance out the negative impact of psychopathy. Supporting the first hypothesis, those with more psychopathic traits had a greater risk of unemployment in the official work setting. Moreover, as intelligence increases, the risk to be unemployed decreases. This model accounted for 43 % of the variance. Basing on the literature on successful psychopathy, intelligence should have especially moderated the relationship between psychopathy and official employment. However, partially in line with the second hypothesis, interaction was found in the unofficial work context: psychopathy increased the risk for unemployment for only when intelligence was lower but not when intelligence was average or high. This model explained 17 % of the variance. A little surprisingly, no correlation between psychopathy and intelligence was found. The groups of employed and unemployed participants differed significantly from each other according to their

intelligence and psychopathic traits so that employed participants as a group were, more intelligent and less psychopathic.

The current results do not support the concept of successful psychopathy per se: psychopathy did not appear as an advantage in any case, even with higher levels of intelligence. On the contrary, psychopathy seems to have a consistent negative impact in the outlook of the life of a juvenile offender in the form of unemployment. In most cases, intelligence did not have a protective impact over psychopathy, and further, higher psychopathy and higher intelligence together did not predict better employment. Thus, these findings contradict the most traditional view of intelligent psychopaths and their better success in the working world compared to others. Psychopathy is therefore likely to affect one's whole life in the form of lower well-being and deprivation of work-related benefits such as income, social aspects and pension that are gained through work. The reasons and phenomena behind the current findings will be discussed starting from the main effects of psychopathy and intelligence, moving on to their interaction, and then touching on the main effects of the demographic variables. Last, the strengths, limitations and implications of the study will be discussed.

4.1 The main effects and the interaction

4.1.1 The main effects of psychopathy and intelligence on unemployment

As expected, psychopathy was an obvious disadvantage in employment by increasing the risk for unemployment, consistent with previous literature. Psychopathy has been associated with unemployment (Lindley, 2017), lower income (Boccio & Beaver, 2015) and fewer years of employment (Andersen et al., 1999). Similarly, the predictive power of lower intelligence to unemployment converges with literature: lower intelligence scores predicted future unemployment (Caspi et al., 1998).

The relationship between psychopathy and the greater risk for unemployment is most likely explained by the psychopathic core personality. Their job choices and behaviors related to work seem less adaptive compared to non-psychopaths. For example, Babiak

(2008) found that psychopathic individuals were perceived to perform worse in their jobs than others. Indeed, the connection between psychopathy and counterproductivity in the workplace has been found (O'Boyle, Forsyth, Banks & McDaniel, 2012). However, psychopathy only explained approximately one per cent of the variance implicating that its direct effect in practice is small. Therefore, the effect could be indirect and mediated by personality traits and their connections to behavior in especially finding and getting a job regardless of their performance in one.

The Big Five taxonomy is a widely recognized personality theory (John & Srivastava, 1999), consisting of traits called Consciousness, Agreeableness, Neuroticism, Openness to Experience and Extraversion. Big Five traits generally strong among psychopaths in different samples are low agreeableness (Lindley, 2017; Lynam et al., 2005; Paulhus & Williams, 2002), low consciousness and low neuroticism (or high emotional stability) (Lindley, 2017; Paulhus & Williams, 2002). These personality traits can affect negatively job search (Kanfer, Wanberg & Kantrowitz, 2001), such as the odds of finding work (Usyal & Pohlmeier, 2011), and behavior at work (Paulhus & Williams, 2002), for instance, lower manageability and sabotage (Schermer, Carswell & Jackson, 2012) and work ethic (Moffit et al.'s 1996). Indeed, it has been argued that the lack of empathy and indifference for others' well-being which are likely to have an impact on the behavior at the work place are caused by the combination of low neuroticism and low agreeableness (Lynam et al., 2005). On the other hand, low neuroticism is often viewed as an advantage and is linked to reduced duration of unemployment (Usyal & Pohlmeier, 2011), and better job commitment and promotability (Schermer et al., 2012). Although interpreting the effect of single traits and trying to predict outcomes merely through their correlations is insufficient, Schermer et al. (2012) note that in their study, individual Big Five traits predicted employment selection situations even better than the general factor of personality.

The risk for unemployment among psychopaths is supported by theoretical frameworks as well. Cumulative continuity of antisociality (Moffit, 1993) describes how antisocial personality and behavior impacts the surrounding world: antisocial behavior, such as criminal activity drives individuals to paths where the interaction of their personalities

and environments expose them to more problems. In line with the current findings, the persistence of outcomes of antisocial personality and behavior have consistently been found: antisociality (and delinquency) has been found to predict unemployment (Bland et al., 1988; Caspi et al., 1988), marginalization from the socioeconomic mainstream by middle-age (Savolainen, Matson, Lyyra & Kokko, 2017), and lower income and poverty at 50 years of age (Samuelson et al., 2009). Similarly, previous conduct problems were related to employment in less-skilled jobs and job change frequency (Maughan et al., 1985). Psychopaths have been found to get fired more often (Boccio & Beaver, 2015). Scattered employment history itself deductively affects one's career development and income. In this study, psychopathy and the antisocial lifestyle themselves explain the risk for unemployment.

Lastly, psychopathology can affect employment opportunities and predispose to unemployment (Bland et al., 1988; Gurel & Lorei, 1972; Veldman, Reijneveld, Verhulst, Ortiz & Bültmann, 2017). Similarly, psychopathology could partly explain the risk for unemployment among psychopaths. Psychopathic individuals had higher levels of prevalent anxious comorbidity (Andersen et al., 1999) and consequently, impaired mental health lowered the chances of finding a new job (Paul & Moser, 2009). Psychopathology was not controlled for in the current study, although it is recommended because of its explanatory power found in previous studies. Ergo, it seems that the lower employment rate of psychopaths can be due to the antisocial aspects of personality, psychopathology, and the concrete difficulties in finding a job, as they might not generally be the employees of the month, predisposing them to a continuum of antisocial behavior.

4.1.2 The modifying impact of intelligence

It was expected that intelligence would indeed lower the risk for unemployment, which it did independently. One of the most interesting findings of this study was that intelligence did not univocally modify the effect of psychopathy on these two employment outcomes. Instead, it functions as a protective factor against unemployment only in the under-the-table environment, balancing out the negative impact of psychopathy. However, these results do not support the concept of successful psychopathy as higher intelligence

combined with psychopathy scores does not lower the risk for being unemployed. This is a new addition to the literature as the differences between these two employment settings have not been studied before. The results support the idea that intelligence can discern between psychopaths according to their employment opportunities, however, only when they work under-the-table.

An interaction between psychopathy and greater IQ has previously been found when intelligence predicted better income compared to those with average intelligence or lower (Boccio & Beaver, 2015). Psychopathy was also linked to higher income and better productivity compared to less psychopathic employees (Lindley, 2017). These differences were explained by the better numerical abilities of psychopaths, supporting the view of enhanced cognitive abilities of psychopaths found outside prisons, for instance. Although higher intelligence in combination with psychopathic traits did not enhance the chances of being employed in the under-the-table context, similarly to the current study, in a general work settings low IQ scores among those that scored high in psychopathy were found to reduce the potential number of employment years (Andersen et al., 1999). Thus, this finding adds to the contradictory pool of studies on the psychopathy-intelligence interaction.

In line with Lykken's (1995) theory of successful psychopathy, intelligence seems to have a way to modify the consequences and enhance the prosocial manifestation of psychopathy. For example, intelligence may provide basic interpersonal skills and thus, access to better opportunities in the workplace. On the contrary, limited intelligence can lead to poor inhibition, and thus, be related to impulsivity (Vitacco et al., 2008), decreasing the chances of employment. In fact, more intelligent psychopaths were found to respond normally to emotions while affective deficits were more prevalent with less intelligent individuals (Bate, Bodushek, Dhingra & Bale, 2014). Among those who had authority, the found relation between psychopathy and counterproductivity in the work place was not strong which could indicate that those who get to positions of authority are better at controlling their antisocial tendencies instead of this finding implicating actual better productivity (O'Boyle et al., 2012). This suggests that emotional control is likely an important factor in explaining why more intelligent psychopaths succeed better in

everyday life. In the current study, those that had lower intelligence were likely to be predisposed to unemployment in the under-the-table setting due to their lower interpersonal skills.

It is possible that the expression of traits that decrease the performance of psychopaths are not examined well with the measures designed to assess counterproductivity, or the finding might be due to the suppressor effect (O'Boyle et al., 2012). However, similarly, in the financial sector, only those that were making moderate income manifested significantly more social influence, fearlessness and stress immunity – traits common for psychopaths – implying a possible optimal level of psychopathy that would enhance professional success (Howe et al., 2014). Exceeding this threshold would not improve their career due to the lacking prosocial skills that are often needed in higher positions, and conversely, higher psychopathy would contribute to antisocial behavior instead (Howe et al., 2014). Concluding, it seems that psychopathy does not prevent success in the workplace likely due to the better interpersonal skills intelligence may enable, although intelligence does not sufficiently turn psychopathy into an advantage.

It was assumed that intelligence would enhance the likelihood of intelligent psychopaths being employed especially officially, as intelligence has been found to be a protective factor against chronic criminality and antisocial tendencies (Assink, van der Put, Machteld, de Vries, Stams & Oort, 2015*;* Wall et al., 2013). Psychopathy has previously been associated with higher employment rate in the service sector, including administration, elementary occupations, and less skilled trades (Lindley, 2017) as well as positions in the financial sector (Howe et al., 2014). Similarly, Maughan et al. (1985) also found that men that have suffered from conduct problems are more often in jobs that require less skills. Why was the expected interaction not found in the community work level, then? The current results do not seamlessly support the concept of successful psychopathy as psychopathy did not increase the odds of a psychopathic person being employed. Similarly, some authors have questioned the existence of successful psychopathy, as psychopaths do not seem to be more likely to avoid arrests than non-psychopaths (Boccio & Beaver, 2018), intelligence and psychopathy together increased the risk for earlier criminal violence (Johansson & Kerr, 2005) and they did not achieve

better success in life (Alink & Egeland, 2013). These studies imply that successful psychopaths do not possess less severe traits or manifest them more adaptively resulting in avoiding criminality. However, they mainly focus on criminal success. Furthermore, employment was not controlled in these previous studies, although it is likely that work can protect against criminality, being a turning point and an alternative for criminal behavior.

Successful psychopathy is likely to be found in under-the-table contexts considering psychopaths' inclination for criminal behavior and evasiveness toward responsibilities. The descriptions of successful psychopaths are alike to that has been found when examining the personality traits of white-collar criminals (Blickle et al., 2006; Ragatz et al., 2012). It has been suggested that fearlessness and manipulation skills could be beneficial in occupations that require ability to work well under pressure (Babiak et al., 2010; Cleckley, 1941; Stoat & Häkkänen-Nyholm, 2009). As higher intelligence was associated with sensation seeking and assertiveness (Watts et al., 2016) that are also prevalent in psychopathy (Hare et al., 2012), intelligent psychopaths might be predisposed to behaviors focused on seeking new stimuli and excitement which under-the-table employment could offer, and on the other hand, might cause them to not be a good fit for many community-based positions.

Moreover, there are advantages with under-the-table income that could tempt psychopaths. They are known to reach for personal gain with little effort from their own side (Hare et al., 2012), and consequently one does not pay taxes from unofficial income. Official income can also be tracked and affect governmental support and monetary advantages offered which should be rather attractive for people that are inclined to be financially dependent on others with no remorse. However, in the additional analyses, those that were employed under-the-table did not differ in their psychopathy scores compared to officially employed, so it does not seem that psychopathic individuals are readily more inclined to work under-the-table. In the current study, support for successful psychopathy was not found as it did not enhance psychopaths' odds of being employed and it could be due to the nature of under-the-table work.

Although under-the-table work is illegal, it can still to a certain extent be described as "honest" work such as being a babysitter, a clerk or a hairdresser that is paid cash in hand. It does not necessarily imply criminal activities such as dealing drugs. Therefore, the current findings can also reflect the opportunities given to a juvenile offender: it might simply be easier to attain a job from the unofficial sector due to the previous conviction. Nonetheless, if employment in the illegal work setting is interpreted as criminality, the results imply that intelligence interferes with psychopathy so that they might be more inclined to act criminally. From one perspective, lower risk for being unemployed when intelligence and psychopathic traits are high is indeed success regardless of the employment being unofficial.

The current findings could also reflect the different criteria for different kinds of work. Perhaps there are more and easier to attain less-skilled jobs offered working under-the-table which provides a better platform for psychopaths with higher intelligence compared to their less advantageous position when competing for official jobs, due to their personality and, also, in the current study, their offending past. On the other hand, considering the advantages of unofficial entrepreneurship and problems attaining a regular job that a juvenile offender might encounter, it may provide another explanation why intelligence moderated the relationship in the under-the-table setting: primary psychopathy – the subtype that is more serious and persistent – has been positively linked to entrepreneurial ability and tendency (Akhtar et al., 2013) but although psychopaths might be more inclined to become entrepreneurs, they rarely seem to do it for social reasons or for creating social change (Akhtar et al., 2013). Deductively, those with higher cognitive abilities would be more likely to success on their own and thus, higher intelligence could shield from the negative impacts of psychopathy traits which is indeed partly in line with the current findings.

Successful psychopaths might exist partly due to their better success compared to prototype psychopaths but might still, in most positions, excel worse than non-psychopaths (Akhtar, Ahmetoglu & Chamorro-Premuzic, 2013). Therefore, the distinction may not be detectable when utilizing robust employment variables of these kinds as they might be too simple to capture the complex and multi-layered phenomenon. Most of the

very few studies however lack the reliable and comparable measurement of the prevalence of psychopathy in different fields and professions (Smith & Lilienfeld, 2013). In addition, previously discussed charisma and charm that stem from higher intelligence might benefit a person in finding a job and doing it well in the illegal context, but these traits may not be advantageous enough in the official work setting because the unattractive features are not masked well enough when there is a lot of competition and structure. Thereby, intelligence does not protect from unemployment in the community context.

What should be noted, though, is that the trend was towards the significance of psychopathy-intelligence interaction (p = .09) in the official work setting as well. However, the utilized sample was large and thus, trends should become significant more easily. Perhaps the interaction could have been found in official work as well if employment was a continuous variable reflecting the ability to keep a job which could be better for those with high intelligence but lesser psychopathic traits, or if only one combined employment variable was utilized. What also should be noted is that some participants were employed in both contexts.

The unsatisfying results, the lack of evidence for successful psychopathy can be partially explained by the incongruities between studies on psychopathy and intelligence that seem to be due to the different emphasis of psychopathy factors and their impact on the manifestation of psychopathy (Vitacco et al., 2008). In fact, those that scored higher in interpersonal features were more intelligent than those who were high in antisocial characteristics (Heinzen et al., 2011). Thus, some possess higher intelligence due to the variation of the traits in their core personality, and thereby differ in their employment outcomes, combining the models of Lykken (1995) and Patrick et al. (2009) which is also partially supported by the interaction found in the current study, where the intelligence measure was the frequently used WASI that yet as a general measurement of intelligence is too robust to assess these differences. Concluding, the interaction in the illegal work context can be explained by the protective ability of intelligence and successful psychopathy, as was hypothesized based on Lykken's (1995) theory.

4.2 The main effects of demographic variables

Multiple variables that were expected to have a main effect on employment were controlled for to reveal the effects of psychopathy and intelligence. In the current study, before conducting the main analyses it was made sure that nor psychopathy or intelligence interact with baseline employment. Since they did not, only baseline employment was controlled for to make sure the results are not due to the advantage of previous employment.

Second, deductively the time that the participant had to spend outside the facility would have an increasing impact on their chances of being unemployed. To control for this effect – although insufficiently – age, location of the last interview and the time spent in recall period across settings were controlled. In fact, the increasing length of the recall period predicted the risk of being unemployed, increasing the odds of unemployment by 12.69 % in the official work setting and by 9.35 % in the under-the under-the-table setting for every added year. This finding is surprising, as it implies that the longer the participant had spent time outside the facility and thus, being able to concretely integrate conversely to the expectations, increased the risk for unemployment. Moreover, interview location was a significant predictor only in the official employment context, as being interviewed at a facility compared to a subject's home increased the risk for unemployment 2.58 times, meaning, the person was more likely to be unemployed when they were interviewed in a facility.

Ethnicity had an impact on the risk of unemployment, which is in line with previous studies on race and bias as there seems to be differences in the employment between white and black young former criminals (Grogger, 1992). Two-thirds of this difference found by Grogger (1992) could be explained by differences in arrests, however. There has also been discussion around the validity of PCL among other races than Caucasian. Nonetheless, it was found that at least PCL-R seemed to provide the same factor structure for both whites and blacks (Cooke, Kosson & Michie, 2001). Even though Vitacco, Neumann and Caldwell (2010) claim there is not enough evidence for the predictive power of the PCL:YV to be equally predictive across ethnicities, there was no differences found between ethnic groups or conviction status and treatment or risk-

assessment (Vachon, Lynam, Loeber & Stouthamer-Loeber, 2012) and thereby, these aspects should not affect these results and thus, are neglected as a factor.

In the current study, the significant effect of ethnicity may reflect various factors behind ethnicity, such as disadvantages created by socio-economic backgrounds. On the other hand, although differences in IQ scores between ethnicities have been found to diminish significantly when differences in poverty and differences in home environment were adjusted, not all could be explained (Brooks-Gunn, Klebanov & Duncan, 1996). Interestingly, there were correlations found between ethnicity and other variables as well, notably the positive association of white ethnicity to intelligence. It is possible that the sample is skewed. However, in this study ethnicity was not a factor of main interest, so the if and how different ethnic groups differed from each other is unknown, nevertheless interesting.

Gender modifies the impact of personality to income (Judge, Livingston & Hurst, 2012; Jonason et al., 2018) which is why it was likely to find a similar main effect from gender to unemployment. On the contrary to the commonly recognized positive effects of agreeableness on various aspects of employment (for example, Schermer et al., 2012), among men, high agreeableness lowered income whereas its impact was reverse and smaller for women (Judge et al., 2012). Neuroticism was negatively, and openness to experience and consciousness positively related to income among males (Judge et al., 2012). Neuroticism and narcissism partially mediated the differences in income and gender, as neuroticism lowered income among women and narcissism among men (Jonason et al., 2018). Men were also employed more often than women (Jonason et al., 2018). Therefore, psychopathic personality and conforming to traditional gender roles might help with gaining better income among men but not among women. These gender differences could reflect the distinctive manifestations and construct of psychopathy between females and males. If the manifestation is different, so could be their ability to find a job. The risk to be unemployed was indeed greater for men than women in both conditions. However, correlational studies do not exclude or consider the effects of mediating and moderating factors and causal connections. Thereby, it could well be that men that are on higher positions rate themselves as less agreeable due to their status and

job requirements (Judge et al., 2012). Another question is, could our results have been different if we had only analyzed females or males.

The effect of age was controlled for because it seemed likely that older age might increase the chances of being employed. In the future, it would be useful to study individuals that are a little older. In this study, the participants were between 21 and 26 at the seventh-year follow-up which is still very young. It would also be interesting to see where the participants of this particular sample are, for instance, in 10 years and if these results converge or change.

There are discrepant results on the typical level of education among psychopaths, generally implying lower potential number of years employed (Andersen et al., 1999), however, conflicting results exist and sometimes psychopathy is linked to an attained university degree (Lindley, 2017). This could reflect the differences between successful and prototype psychopaths. Deductively, those juvenile offenders with more education might be advantaged compared to others. Therefore, in the future studies controlling for the years of education should be considered. It would also be interesting to know if years of education would have an association with psychopathy or intelligence in the current sample.

4.3 Strengths and practical implications

The current study provides theoretical contributions to the literature of successful psychopathy, and these findings also offer a fertile base and highlight the utility for similar research outside the prison context. This study is especially accomplished in adding to the previous literature by being the firsts of its kind in addressing factors that impact unemployment in two different contexts with a predictive analysis, facilitating understanding around the phenomenon of psychopathy and the outlook of juvenile offenders. It is also possible that the scarcity of studies about this topic is due to non-significant results that consequently never got published.

The results of the current study serve to alleviate the molding of more effective ways of dealing with this population and to awaken interest to the relation between psychopathy and unemployment. The problem is that we can acknowledge the negative impacts of psychopaths but also need to balance between ethical decision making and humane moral, and simultaneously consider the society's well-being in 2020. There are indeed two main levels for why it is important to investigate the relationship between psychopathy and unemployment. On an individual level, unemployment has a significant impact on one's mental health and the level of difficulty of psychological problems (Paul & Moser, 2009). Mental health problems are likely to decrease further employment whereas reemployment enhances mental health (Paul & Moser, 2009) and thus affect the quality of life.

On a community level, psychopaths are said to create chaos and cause pain around them (Hare et al., 1990) and can affect the working environment in a way that is costly for companies and their image by reflecting bad communication and creating lesser job satisfaction (Clive, 2012). Implications to legislation could be drawn from studies focusing on their effect on the society through understanding how they live – if they are employed and where. This study could tentatively help answering the question "What can we do with this group of people?". Psychopaths can affect the working environment in a way that is costly for companies and their image by reflecting bad communication and creating lesser job satisfaction (Clive, 2012). However, in their literature review, Smith and Lilienfeld (2013) note that, the research on this matter is still scarce and involves many methodological weaknesses. There is much discrepancy between the amount of valid research (little) and media coverage (a lot), deepening the pigeonhole (Smith & Lilienfeld, 2013). Moreover, prevalence of psychopathy is much higher in the workplace than the current view of its prevalence is in the general population (Caponecchia, Sun & Wyatt, 2012), which reflects people's tendency to label unlikable co-workers as psychopaths basing on the mental images provided through media. For example, there is a positive association between psychopathy and unethical decision-making (Stevens, Deuling & Armenakis, 2012).

Better understanding around the impacts of psychopathy on individual's everyday life is needed for creating better intervention and integration practices. Arrests themselves diminish employment opportunities (Grogger, 1992), and recurring arrests do not reflect what the Finnish justice system aims for, which is a low recidivism rate and integration back to the society (Pitts & Kuula, 2005). Recidivism is more common for psychopathic criminals compared to non-psychopaths (Leistico et al., 2007). However, there are many psychopaths that do not continue criminal activities after their incarceration (Hemphill et al., 1998; Salekin et al., 1998). The goal aim for eliminating the cycle of imprisonment and help them get back on track.

Similarly, traditional interventions do not often have an impact on psychopaths (Campbell, Porter & Santor, 2004) but on the contrary, can enhance their abilities to manipulate and deceive, and increase their risk for recidivism (Rice, Harris & Cormier, 1992). However, some are more responsive to treatment than others (Hare et al., 2000). This highlights the fact that psychopaths are not a homogenous group and the effectiveness of interventions might be different when distinctive treatment is focused on the specific, acknowledged type of psychopathy. Thereby, even if "healing" psychopathy is incredibly difficult, it is important to know the consequences of the phenomenon in different contexts, so we can navigate better in the same environment with psychopathic individuals and find out new ways to influence them. For now, it seems that they are heading for failure.

Some events commonly appear as life-changing turning points (Sampson & Laub, 1993) – opportunities to break the continuity of antisocial behavior. These events do not always seem to manifest themselves in a typical way as life events such as work do not have a similar effect on antisocial and psychopathic personalities (Alink & Egeland, 2013). Thus, traditional rehabilitation methods such as rehabilitating work might not be impactful. There is, in fact, support for the distinct effects of work in the life of antisocial individuals. The group with early onset antisocial behavior indeed did not profit from the benefits of work alike other groups did (Moffitt et al., 2002). Furthermore, the link between aggressive antisocial behavior and unemployment seems to be a two-way-street: unemployed youth reported more aggressive antisocial behavior than those working over

20 hours per week (Monahan, Steinberg & Cauffman, 2013). It appears that positive effects related to working more than 20 hours per week only existed when work was paired with school attendance among the juveniles (Monahan et al., 2013). Thus, developmental adaptation might not occur leading to continuity of antisocial behavior. On the other hand, it is possible that psychopathic individuals do not have the same access to these kinds of positive and reforming experiences and are less likely to attain them. Thus, the impact of work can be different in different populations.

Based on the current study, it would have been interesting to examine if the different groups (employed/unemployed, official/illegal etc.) differed from each other by their personality traits. For example, consciousness is traditionally seen as a distinctive trait between prototype and successful psychopaths (Lilienfeld et al., 2015), and is generally associated with positive aspects of work (Kanfer et al., 2001; Schermer et al., 2012; Uysal & Pohlmeier, 2011) and higher self-reported income (Jonason et al., 2018). It would also be useful to compare the employment opportunities multiculturally. Another direction for future research is exploring the relations between success, psychopathy and intelligence and the discrepancies in previous literature, and if the concepts used are indeed the correct ones. Abstraction and inference abilities were a significant predictor of Machiavellianism but not psychopathy (Kowalski et al., 2018). There are differences in the distinction of psychopaths and Machiavellianists that in fact, resemble the descriptions of successful psychopaths: as psychopaths are often characterized by poor health and being out of employment, Machiavellianism is associated to good health and employment (Lindley, 2017). The higher pay psychopaths received could be explained by their numerical abilities, whereas the higher financial rewards among those with high Machiavellianism could not be explained (Lindley, 2017). According to Lindley, this could be the result of their ability to manipulate, exploit others and in practice, bargain, which may be the essential reason why they are more often found in managerial positions. Could it be, that successful psychopaths should in fact be labelled as Machiavellianists?

In short, based on the results from the current study and additional future research, it is hopefully possible to develop more precise and functional professional guidance and optimized treatment and abetment, both for workplaces and for the integration of

psychopathic individuals to the society aiming to diminish their negative impact. For now, it seems that psychopaths are in a way, destined to fail.

4.4 Limitations

The results of this study cannot be deemed as perfectly reliable due to various limitations in the construct of psychopathy, the used data and its collection procedures. First, the validity of the concept of psychopathy has been questioned (Seagrave & Grisso, 2002; Skeem & Cauffman, 2003). Nonetheless, there needs to be a way to study different personality profiles and their correlates and causality to other phenomena, and thereby, these concepts are needed in scientific research. Critique can also be given for labeling young people as psychopaths. It can be harming for young individuals due to stigmatization and for the special characteristics involving psychopathy and its prognosis. This was nonetheless, avoided in this study as it was executed retro-graphically utilizing the already collected data and cut-off values dividing individuals to psychopaths and non-psychopaths were not used but instead, psychopathic traits and their strength were examined and viewed as a continuum of traits rather than a dichotomous phenomenon.

The descriptions of the variables that were used to assess the employment outcomes are not comprehensively explained in the material of the original study. Instead, they are simply described as legal and illegal. In addition, the number of weeks worked was derived from a coding scheme and was not directly reported by the subject. Thus, the used variables can be more complex than just official and unofficial jobs and they may lack validity. In the future, it would be helpful to study the relationship with more reliable and multidimensional employment variables to get a better idea of how psychopathy and intelligence together affect employment outcomes.

A very important limitation is the intermittent weak inter-rater reliability in the practice sessions concerning assessment of psychopathic traits. In the practice sessions, the raters assessed six videos and the assessments were then compared with Adele Forth's (one of the PCL's developers) scorings. As the raters practiced scoring, the values of weighted

kappas were around -.02 (inability to take responsibility) and .85 (serious criminal behavior). Reliability was the strongest for those items that could be objectively observed, ergo were related to criminal behavior. Inter-rater reliability was especially low for impulsivity (.33), superficial emotional life (.35) and impression management (.35). Overall, these reliability problems partly question the reliability of the psychopathy scores in the actual interviews as well.

These findings can only be generalized to populations alike the current sample. A few inconsistencies between adult and adolescent psychopathy have been found at least in a sample of non-violent incarcerated adolescents (Campbell et al., 2004). There was no association between psychopathy scores to prior convictions that included violence, non-violence and technical violation convictions. These differences could mirror differences in how psychopathy is manifested in adolescence in contrast to adulthood (Campbell et al., 2004). To attain better generalizability, gender and age were centered, ergo the results are generalizable to American young criminals, both men and women. What should be noted, are the differences between European and American cultures and their justice and employment systems. The differences between American and Nordic working life might provide different opportunities. Similarly, the differing justice systems can have impacts on the future employment.

4.5 Conclusions

The current results strengthen the previous literature on the negative effects of psychopathy on an individual's life and work. Higher psychopathy scores and lower intelligence independently increase the risk of unemployment in an official work environment. In under-the-table employment, intelligence moderated the effect of psychopathy so that psychopathy increased the risk for unemployment only when intelligence was lower. In short, the found results can be explained by, for example, psychopathic traits that affect work performance and behavior related to seeking jobs and at the work place itself, continuity of antisociality and psychopathology, and by the protective effect of intelligence. Somewhat unexpectedly, support for the framework of

successful psychopathy is not provided per se, however, the protective ability of intelligence is partially supported.

Despite of the limitations, the study reaches many merits: it is the first one of its kind in the current knowledge to explore the relationship of psychopathy and the moderating effect of intelligence to employment in two different contexts from a causal viewpoint. The most significant finding from this study were the found interaction of psychopathy and intelligence, and the equivocal models in official and under-the-table work. The study provides complementary information on the negative impact of psychopathy to employment and then, differing opportunities individuals seem to face and take on according to their core personality and intelligence. Last, this study addresses the need for further research to enable the integration of both juvenile offenders and young psychopathic individuals back into the society and develop better practices to support transition, preventing their destination to failure.

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